

Application Serial No. 10/687,888
Amendment dated July 12, 2005
Reply to Office Action dated May 26, 2005

REMARKS

Claims 1-10 are pending in the present application. Claims 1-10 have been rejected. In view of the discussion below of the cited prior art, it is believed the present application, including claims 1-10, is in condition for allowance.

Claim Rejections - 35 U.S.C. § 103

The Examiner has rejected claims 1, 2, 9, and 10 under 35 U.S.C. § 103(a) as being unpatentable over Müller (U.S. Patent No. 4,426,158) in further view of Schwartz (U.S. Patent No. 5,210,722). The Examiner states that Müller teaches every aspect of the invention except a single (one and only one) connection of a gear and/or gearshaft through the stator plate. However, the Examiner states that Schwartz teaches a single connection through the stator plate of geartrains above and below the stator plate to allow for space consolidation of the geartrains and allowing more space for a battery. The Examiner therefore suggests that it would have been obvious to a person of ordinary skill in the art, at the time of the invention, to use the single connection of Schwartz in the motor of Müller to arrive at the claimed invention. Applicants respectfully disagree because (1) one would not be motivated to combine Müller and Schwartz because to do so would require an unwarranted modification of Müller, and (2) even if one were to combine Müller and Schwartz (even though there is no motivation to do so), the combination still does not teach every limitation of Independent claim 1, and thus dependent claims 2 through 10.

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As an initial matter, Applicants agree with the Examiner that Müller does not disclose a two-piece single connection of the geartrain through a stator plate. As can be seen from Fig. 2B of Müller, the geartrain includes a wheel 46 including a spindle 44 that is disposed through a bore 40 in the stator 2. However, Müller also includes spindle 18 and wheel 20, which form a second connection through the stator plate. So Examiner looks to Schwartz to provide a geartrain having only a single connection through the stator plate.

However, Applicants assert that one skilled in the art would not combine the configuration of the geartrain of Schwartz with the Müller apparatus.¹ If one were to add the geartrain of Schwartz to the apparatus of Müller, one would have an apparatus of Müller that destroys one of the very purposes of Müller. In Müller, and at least at column 2, lines 20-31, Müller discusses that one of its purposes is to provide an analog display watch that includes simplified assembly in order to reduce the size of the watch. One of the manners in which this is achieved in Müller is providing a single plate (i.e., the stator plate) with the gears, support structure, and other components disposed through and around the plate. Multiple connections through the stator plate serve to reduce overall size by compacting the geartrain. If one were to replace that

¹Although Applicants herein discuss the combination of the geartrain of Schwartz with the apparatus of Müller, this should not be taken as an admission on the part of Applicants that Schwartz discloses a single connection of geartrain through a stator plate. Quite the contrary, and as will be set forth later in greater detail, Applicants specifically argue that Schwartz does not disclose a single connection of a geartrain through a stator plate.

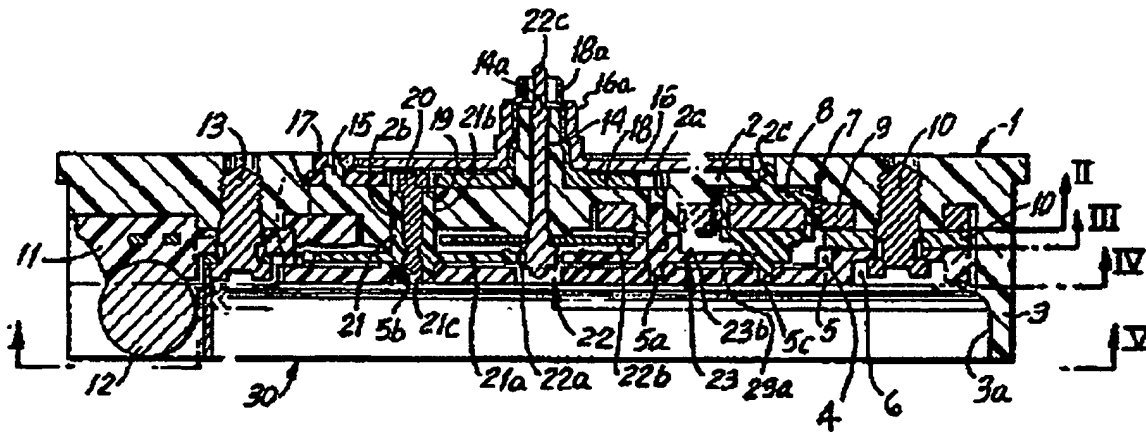
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configuration with the geartrain configuration shown in Schwartz, one would have to expand the size of the watch in Müller in order to accommodate the now expanded size of the geartrain. This runs contrary to a stated purpose of Müller, and thus would make no sense, and certainly would not have been an obvious thing to do.

Further, regardless of whether one skilled in the art would be motivated to combine Müller and Schwartz (which Applicants submit one would not be), any such combination would fail to teach all limitations of claim 1 (and thus dependent claims 2-10). This is because Schwartz, like Müller, does not disclose a two-piece single connection of a geartrain through a stator plate.

Schwartz describes an analog timepiece. Referring to Fig. 1 of Schwartz (reproduced below), the components of the timepiece include a frame member 1 having a top central wall 2. Side walls 3 (depending from the top central wall) and a bridge member 5 define an inner cavity 4. This inner cavity includes a stepping motor 7 having a rotor 8 and a stator 9. The inner cavity also includes two geartrains: (1) A dial side geartrain and (2) a movement side geartrain. The dial side geartrain includes an hour wheel 16, a minute wheel reduction assembly 17, a center wheel 18, a pinion 20, and a plastic wheel member 21 (see column 3, lines 17-36). The movement side geartrain includes a third wheel assembly 19, a seconds wheel assembly 22, and an intermediate wheel assembly 23 (see column 3, lines 54-58).

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The intermediate wheel assembly 23 is the only portion of either geartrain associated with the stator plate 9. However, as can be seen from Fig. 1, the intermediate wheel assembly 23 does not connect the geartrains through the stator plate. Rather, it is simply journaled into the top central wall 2. In fact, according to Schwartz, the connection of dial side geartrain and movement side geartrain does not occur through the stator plate. At column 3, lines 32-36, Schwartz states, "The third [wheel] assembly [19] is one element of a movement-side geartrain . . . and extends through the top central wall of the frame to couple the dial-side geartrain to said movement-side geartrain." Thus, the geartrain connection occurs at the third wheel assembly 19. As can be seen from Fig. 1, this connection occurs nowhere near the stator plate and certainly is not through the stator plate. Further, column 3, lines 59-60, of Schwartz states, "The movement-side geartrain drives the dial-side geartrain from

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the pinion 20 of the third wheel assembly." Again, referring to Fig. 1, this does not occur through the stator plate. And finally, column 4, lines 13-19 (referring to Fig. 2), of Schwartz also make clear that the geartrain is not connected through the hole in the stator, but that intermediate wheel is merely journaled to top central wall: "It is particularly important to notice a hole 9d passing through the stator and serving to locate the stator on a peg which is integral with the frame and which defines a central bore 2a. Bore 2a serves to rotatably journal the non-magnetic intermediate wheel assembly 23 (see FIG. 1)." Thus, a peg of the frame is disposed through the hole 9d in the stator and the intermediate wheel assembly 23 is journaled in a bore of this portion of the frame. But there is no connection of a geartrain that occurs through the stator plate.

Thus, Schwartz does not form a "connection of said geartrain through said stator plate" as is recited by claim 1 of the present application. Rather, the connection occurs "around" the stator plate: rotor 8 drives intermediate wheel 23, which drives seconds wheel 22, which drives toothed wheel 21 of third wheel assembly 19, which drives minutes wheel 17 and hour wheel 16. Thus, Applicants submit that no combination of Müller and Schwartz can show a two-piece single connection of a geartrain through a stator plate, as is recited in independent claim 1 of the present invention. Thus, Applicants further submit that claim 1 is not rendered obvious by Müller in view of Schwartz, and therefore respectfully request a withdrawal of the

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rejection of claim 1 as obvious over Müller in view of Schwartz. Applicants further submit that each of claims 2, 9, and 10 ultimately depend from claim 1. Since claim 1 is not rendered obvious by Müller in view of Schwartz, Applicants respectfully submit that neither are dependent claims 2, 9, and 10 rendered obvious by Müller in view of Schwartz, and respectfully request a withdrawal of the rejection of claims 2, 9, and 10.

The Examiner has rejected claims 3-5 under 35 U.S.C. § 103(a) as being unpatentable over Müller and Schwartz in further view of Horbach (U.S. Patent No. 3,215,964).

In order to establish a prima facie case of obviousness, the Examiner must show that the cited references, as combined, teach or suggest each of the elements of the claims. Claims 3-5 each ultimately depend from independent claim 1, and thus incorporate the limitations of that claim. At least for the reasons discussed above, one skilled in the art would not be motivated to combine Müller and Schwartz, and, in any event, the combination of Müller and Schwartz does not teach or suggest each and every element of claim 1. Further, it is submitted that Horbach fails to teach the elements of claim 1 that are missing from Müller and Schwartz. More specifically, Applicants submit that, like Müller and Schwartz, Horbach does not teach or suggest a geartrain including meshing gears and gearshafts on both opposite sides of the stator plate with "at least one gear and/or gearshaft comprising at least two pieces adapted to engage one another to form a single connection of said geartrain through said stator

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plate," as presently recited in claim 1. Thus, regardless of whether one skilled in the art would be motivated to combine the teachings of the three references (Applicants submit that one would not), it is submitted that any combination of Müller, Schwartz, and Horbach does not show each and every element of claims 3-5, as those claims are ultimately dependent on claim 1. Accordingly, withdrawal of the obviousness rejection of claims 3-5 is requested.

The Examiner has also rejected claims 6-8 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Müller and Schwartz in further view of Plancon (U.S. Patent No. 4,888,507).

In order to establish a prima facie case of obviousness, the Examiner must show that the cited references, as combined, teach or suggest each of the elements of the claims. Claims 6-8 each ultimately depend from independent claim 1, and thus incorporate the limitations of that claim. At least for the reasons discussed above, one skilled in the art would not be motivated to combine Müller and Schwartz, and, in any event, the combination of Müller and Schwartz does not teach or suggest each and every element of claim 1. Further, it is submitted that Plancon fails to teach the elements of claim 1 that are missing from Müller and Schwartz. More specifically, Applicants submit that, like Müller and Schwartz, Plancon does not teach or suggest a geartrain including meshing gears and gearshafts on both opposite sides of the stator plate with "at least one gear and/or gearshaft comprising at least two pieces adapted to

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engage one another to form a single connection of said geartrain through said stator plate," as presently recited in claim 1. Thus, regardless of whether one skilled in the art would be motivated to combine the teachings of the three references (Applicants submit that one would not), it is submitted that any combination of Müller, Schwartz, and Plancon does not show each and every element of claims 6-8, as those claims are ultimately dependent on claim 1. Accordingly, withdrawal of the obviousness rejection of claims 6-8 is requested.

Conclusion

For the foregoing reasons, it is submitted that this application is in condition for allowance.

It is believed that no fee is due with this submission. If any fee or surcharge is deemed due, please charge Deposit Account No. 23-3000.

The Examiner is invited to contact the undersigned attorney with any questions or remaining issues.

Respectfully submitted,

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